

REMARKS/ARGUMENTS

Claims 1-20 are pending in the present application. Claims 1 and 11 have been amended. No new subject matter has been added. Claims 1 and 11 were rejection under 35 U.S.C. 102(b) as being anticipated by Tanaka. Applicants respectively traverse the rejection.

Claim 1 is directed to a method for forming a storage node of a semiconductor device forming a plurality of bit line patterns, each including a wire and a hard mask sequentially stacked over a surface of a substrate structure; sequentially forming a first barrier layer and a first inter-layer insulation layer along a profile containing the bit line patterns and filling spaces between the bit line patterns; etching the first inter-layer insulation layer without exposing the first barrier layer, so that at least a partial portion of the first inter-layer insulation layer remains over the first barrier layer between the bit line patterns; forming a second barrier layer over the first inter-layer insulation layer and the first barrier layer; and etching the first and the second barrier layers and the partial portion of the first inter-layer insulation layer to expose a surface of the substrate structure disposed between the bit line patterns.

As recited, the first inter-layer insulation layer is not etched away entirely. At least part of the first inter-layer insulation layer remains over the first barrier layer (see Fig. 4B, note numeral 42A). In contrast, Tanaka discloses a contact hole 28 being formed by etching through the layers 24, 25, and 26, so that the contact hole exposes the surface of the substrate. Accordingly, Tanaka does not disclose the recited features above. Claim 1 is allowable.

Claim 11 recites, among other features, "etching the first inter-layer insulation layer until a second space is defined between the first and second bit line patterns without exposing the first barrier layer provided between the first and second bit line patterns..." Tanaka does not disclose at least the above features. Claim 11 is allowable at least for this reason.

Claims 2-10 and 12-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Huang. Applicants respectfully traverse the rejection. Claims 2-10 depend from claim 1 and claim 12-20 depend from claim 11 and are allowable at least for this reason.

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PATENT

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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